

1. (Currently Amended) A method for removing paint from a painted plastic parts part which comprises treating the painted plastic part at a temperature and for a time sufficient to remove the paint therefrom with a solvent mixture comprised of a high-boiling aprotic polar organic solvent and a pH adjuster, wherein the solvent is at least one selected from the group consisting of N-methyl pyrrolidone, N-hydroxyethyl pyrrolidone, N-cyclohexyl pyrrolidone, N-ethyl pyrrolidone, 1 5-dimethyl piperidone, 1 ,3-dimethyl piperidone, and 1 ,3-dimethyl-2- imidazolidinone and mixtures thereof.

2. (Original) The method of claim 1 wherein the pH adjuster is an aqueous mineral acid.

3. (Original) The method of claim 1 wherein the pH adjuster is a tetraalkyl ammonium hydroxide.

4. (Currently Amended) A method for removing paint from a painted plastic parts part which comprises treating the painted ~~parts~~ plastic part at a temperature and for a time sufficient to remove the paint therefrom with a solvent mixture of a high-boiling pyrrolidone or piperidone lactams solvent which is at least one selected from the group consisting of N-methyl pyrrolidone, N-hydroxyethyl pyrrolidone, N-cyclohexyl pyrrolidone, N-ethyl pyrrolidone, 1 5-dimethyl piperidone, 1 ,3-dimethyl piperidone, and 1 ,3-dimethyl-2- imidazolidinone and mixtures thereof, and an aqueous mineral acid.

5. (Currently Amended) A method for removing paint from a painted plastic parts part which comprises treating the painted ~~parts~~ plastic part at a temperature and for a time sufficient to remove the paint therefrom with a solvent mixture of ~~an aqueous mineral~~ hydrochloric acid and a solvent selected from the group of dimethylsulfoxide, dimethylacetamide, dimethylformamide and a terpene liquid.

6. (Currently Amended) A method for removing paint from a painted plastic parts part which comprises treating the painted ~~parts~~ plastic part at a temperature and for a

time sufficient to remove the paint therefrom with a solvent mixture of a high-boiling pyrrolidone or piperidone lactams solvent which is at least one selected from the group consisting of N-methyl pyrrolidone, N-hydroxyethyl pyrrolidone, N-cyclohexyl pyrrolidone, N-ethyl pyrrolidone, 1,5-dimethyl piperidone, 1,3-dimethyl piperidone, and 1,3-dimethyl-2-imidazolidinone and mixtures thereof, and a tetraalkyl ammonium hydroxide.

7. (Currently Amended) A method for removing paint from a painted plastic parts part which comprises treating the painted ~~parts~~ plastic part at a temperature and for a time sufficient to remove the paint therefrom with a solvent mixture of a tetraalkyl ammonium hydroxide and a solvent selected from the group of dimethylsulfoxide, dimethylacetamide, dimethylformamide and a terpene liquid.

8. (Original) The method of claim 1 wherein ultrasonic energy is applied to the combination of the painted part and the solvent mixture.

9. (Original) The method of claim 1 wherein the painted part is comminuted.

10. (Original) The method of claim 1 wherein the painted part is kept intact.

11. (Currently Amended) The method of ~~claim 7~~ claim 9 wherein the comminuted painted part is stirred in the solvent mixture.

12. (Cancelled)

13. (Currently Amended) A method of ~~claim 12~~ wherein the solvent is for removing paint from a painted plastic part which comprises treating the painted plastic part with a solvent mixture comprised of N-methyl pyrrolidone and a pH adjuster.

14. (Currently Amended) The method of claim 2 or 13 wherein the pH adjuster is an acid is selected from the group consisting of hydrochloric, sulfuric and phosphoric acid.

15. (Original) The method of claim 14 wherein the acid is hydrochloric acid.
16. (Currently Amended) The method of claim 15 wherein the acid is a solution of 36-37% hydrochloric acid.
17. (Original) The method of claim 8 wherein the ultrasonic energy is applied at a frequency of about 25 kHz.
18. (Original) The method of claim 1 which is carried out at a temperature of from about 40⁰C to about 150⁰C.
19. (Currently Amended) The method of ~~claim 19~~ claim 1 which is carried out at a temperature of from about 70⁰C to about 90⁰C.
20. (Currently Amended) The method of claim 1 wherein the painted plastic part is formed of nylon.
21. (Currently Amended) The method of claim 1 wherein the painted plastic part is formed of thermoplastic polyolefin.
22. (Currently Amended) The method of claim 1 wherein the painted plastic part is formed of acrylonitrile-butadiene-styrene.
23. (Currently Amended) A method of removing automotive paint systems from reject plastic parts which comprises the steps of
- a) immersing the parts in ~~the~~ a solvent mixture comprised of claim 4 a high-boiling aprotic polar organic solvent which is at least one selected from the group consisting of N-methyl pyrrolidone, N-hydroxyethyl pyrrolidone, N-cyclohexyl pyrrolidone, N-ethyl pyrrolidone, 1,5-dimethyl piperidone, 1,3-dimethyl piperidone, and 1,3-dimethyl-2-imidazolidinone and mixtures thereof at a temperature of about 70 – 90⁰C; and

- b) applying ultrasonic energy to the immersed parts in the solvent mixture at a frequency of about 25 kHz for about 30 — 40 minutes sufficient to remove the automotive paint systems from the parts;
- c) ~~b)~~ rinsing the parts with water one or more times; and
- d) ~~e)~~ drying the parts.

24. (Currently Amended) A method of removing automotive paint systems from waste plastic parts which have been comminuted into plastic chips which comprises the steps of:

- a) immersing the plastic chips in the a solvent mixture comprised of claim 1 a high-boiling aprotic polar organic solvent which is at least one selected from the group consisting of N-methyl pyrrolidone, N-hydroxyethyl pyrrolidone, N-cyclohexyl pyrrolidone, N-ethyl pyrrolidone, 1,5-dimethyl piperidone, 1,3-dimethyl piperidone, and 1,3-dimethyl-2-imidazolidinone and mixtures thereof; and
- b) mixing the immersed plastic chips in the solvent mixture for ~~from~~ about 15 minutes to about 2 hours at a temperature between about 70 – 90°C sufficient to remove the automotive paint systems from the plastic chips;
- c) ~~b)~~ separating the automotive paint particles systems from the plastic ~~substrate~~ chips and the solvent mixture;
- d) ~~e)~~ rinsing the plastic chips; and
- e) ~~d)~~ drying the plastic chips.

25 – 35. (Cancelled)

36. (Currently Amended) A method for removing paint from a painted plastic parts part which comprises treating the painted plastic part at a temperature and for a time sufficient to remove the paint therefrom with a solvent mixture comprised of a high-

boiling pyrrolidone or piperidone lactam solvent which is at least one selected from the group consisting of N-methyl pyrrolidone, N-hydroxyethyl pyrrolidone, N-cyclohexyl pyrrolidone, N-ethyl pyrrolidone, 1,5-dimethyl piperidone, 1,3-dimethyl piperidone, and 1,3-dimethyl-2-imidazolidinone and mixtures thereof, a surfactant and an aqueous mineral acid.

37. (Currently Amended) The method of ~~claim 29~~ claim 36 wherein the surfactant is an alcohol alkoxylate phosphate ester or a non-linear alcohol alkoxylate.

38 – 39. (Cancelled)